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## **ABSTRACT**

2       A rugged terrain robot (RTR) apparatus can function as  
3    a reconnaissance robot to optimize safety of search or  
4    rescue personnel. Remote control places the RTR in either a  
5    rolling mode or in a stair-climbing mode. Remote feedback is  
6    provided by an on-board RTR camera and microphone. The RTR  
7    consists of two clamshell sections and a tail boom section.  
8    The RTR uses polymorphic locomotion of the clamshells for  
9    efficient maneuverability in traversing rugged terrain when  
10   in a "rolling" mode and is switched remotely into a stair-  
11   climbing mode (or extreme terrain) using end-over-end  
12   clamshell motion with a tail boom assist to climb stairways.  
13   The RTR can carry various communication devices, sensors and  
14   payloads for use by police, firemen, soldiers, rescue or  
15   other applications to optimize safety when direct entry by a  
16   human may not desirable until an area is reconnoitered. The  
17   RTR is remote controllable and easily transported to a  
18   reconnaissance area.  
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